

**WHAT IS CLAIMED IS:**

1. A method for producing an image data to be used by a laser thermal transfer apparatus having a multiple channel printhead of laser beams for transferring different organic material with dopants from a donor onto an OLED substrate to form different color emissive sites on the substrate, comprising:
  - a) receiving a graphical representation of the layout of the color emissive sites and alignment marks formed on the OLED substrate;
  - b) responding to such graphical representation and position of alignment marks to form coordinates to define the size and location of the color emissive sites on the OLED substrate relative to the alignment marks;
  - c) adjusting the coordinates of the color emissive sites to change the size and location of the color emissive sites to compensate for predetermined known errors that will be caused by the laser thermal transfer apparatus; and
  - d) producing the image data to be used by the laser thermal transfer apparatus that includes positions for actuating the printhead with respect to the alignment marks and the sequence for actuation of selected printhead laser beams.
2. The method of claim 1 further including determining if the size and location of the color emissive sites are compatible with the laser thermal transfer apparatus.
3. The method of claim 1 wherein the laser thermal transfer apparatus printhead is adapted to scan the printhead laser beams across the surface of the donor.
4. The method of claim 1 further including characterizing errors by using the laser thermal transfer apparatus to form the color emissive sites onto the OLED substrate and determining the predetermined known errors caused by such laser thermal transfer apparatus.